



AZCL-POLYSACCHARIDES FOR THE ASSAY OF *endo*-HYDROLASES

01/04

AZCL-Polysaccharides (Azurine-Crosslinked Polysaccharides) are prepared by dyeing and crosslinking highly purified polysaccharides. They are supplied as a fine powder (milled to pass a 0.5 mm screen). These substrates are insoluble in buffered solutions, but rapidly hydrate to form gel particles which are readily and rapidly hydrolysed by specific *endo*-hydrolases releasing soluble dye-labeled fragments.

These substrates can be used to locate enzyme activities in electrophoresis gels and to locate specific enzyme-producing micro-organisms on culture plates. In tablet form, they can also be used to measure enzyme activities in standard test-tube assays.

SUBSTRATES, APPLICATIONS and SUGGESTED BUFFER

SUBSTRATE	ENZYME	BUFFER
AZCL-Amylose	α -Amylase (Fungal)	Na acetate, 100mM, pH 4.4.
	(Cereal)	Na maleate, 100mM, pH 6.0.
	(Bacterial)	Bis-Tris, 100mM, pH 7.0.
AZCL-Barley β -Glucan	Malt β -Glucanase	Na acetate, 25mM, pH 4.5
	Lichenase	Na phosphate, 25 mM, pH 6.5.
AZCL-HE-Cellulose	Cellulase (<i>Trichoderma</i>)	Na acetate, 25 mM, pH 4.5.
	Cellulase (<i>Trichoderma</i>)	Na acetate, 25mM, pH 4.5.
	Cellulase (<i>Aspergillus</i>)	Na acetate, 25mM, pH 4.5.
AZCL-Curdlan & -Pachyman	<i>endo</i> -1,3- β -Glucanase	Na acetate, 50mM, pH 6.0
AZCL-Debranched Arabinan	<i>endo</i> -Arabinanase	Na acetate, 50mM, pH 4.0.
AZCL-Dextran (No.B-512)	<i>endo</i> -1,6- α -Dextranase	Na acetate, 50mM, pH 5.0.
AZCL-Galactomannan	<i>endo</i> -1,4- β -Mannanase	Na acetate, 50mM, pH 4.5.
AZCL-Galactan (potato or lupin)	<i>endo</i> -1,4- β -Galactanase	Na acetate, 25mM, pH 4.3.
AZCL-Chitosan	Chitosanase	Na acetate, 50mM, pH 5.0.
AZCL-Lichenan	Malt β -Glucanase	Na acetate, 25mM, pH 4.5
	Lichenase	Na phosphate, 25 mM, pH 6.5.
AZCL-Pullulan	Malt Limit-dextrinase	Na maleate, 100mM, pH 5.5.
	Microbial pullulanase	Na acetate, 100mM, pH 5.0
AZCL-Xyloglucan (Tamarind)	Cellulase (<i>Trichoderma</i>)	Na acetate, 25 mM, pH 4.5.
AZCL-Xylan (Birch or oat)	<i>endo</i> -Xylanase	Na acetate, 25mM, pH 4.7.
AZCL-Arabinoxylan (wheat)	<i>endo</i> -Xylanase	Na acetate, 25mM, pH 4.7.
AZCL-Casein	<i>endo</i> -Protease	Na phosphate, 100mM pH 7.0.
AZCL-Collagen	<i>endo</i> -Protease	Na phosphate, 100mM pH 7.0.
AZCL-Rhamnogalacturonan I	Rhamnogalacturonanase	Na acetate 50 mM pH 4.5 (or 8)

NOTE: For use in agar plates, a concentration of 0.1% of AZCL-Polysaccharide is suggested.

CONDITIONS OF USE OF AZCL-POLYSACCHARIDES:

AZCL-Polysaccharides are the active ingredient in the test tablets supplied by Megazyme. Consequently, further information on possible applications and assay conditions for these substrates can be obtained by reference to the appropriate Test Tablet booklet. In general, the concentration of the AZCL-polysaccharide in the test tablet is 30% w/w.

AZCL-Polysaccharide	Test Tablet	For the Measurement of:
AZCL-Amylose	Amylazyme α -Amylase Amylazyme BG	α -Amylase
AZCL-Barley β -Glucan	Beta-Glucazyme	Malt β -Glucanase Lichenase Cellulase (<i>Trichoderma</i>)
AZCL-HE-Cellulose	Cellazyme C	Cellulase (<i>Trichoderma</i>) Cellulase(<i>Aspergillus</i>)
AZCL-Chitosan	Chitozyme	<i>endo</i> -Chitosanase
AZCL-Curdlan & -Pachyman	1,3-Beta Glucazyme	<i>endo</i> -1,3- β -Glucanase
AZCL-Debranched Arabinan	Arabinazyme	<i>endo</i> -Arabinanase
AZCL-Dextran (No.B-512)	Alpha-Dextrizyme	<i>endo</i> -1,6- α -Dextranase
AZCL-Galactomannan	Beta-Mannazyme	<i>endo</i> -1,4- β -Mannanase
AZCL-Galactan (potato or lupin)	Galactazyme	<i>endo</i> -1,4- β -Galactanase
AZCL-Lichenan	(not in tablet form)	Malt β -Glucanase Na acetate, Lichenase
AZCL-Pullulan	Limit-Dextrizyme	Malt Limit-dextrinase Microbial pullulanase
AZCL-Xyloglucan (Tamarind)	Cellazyme TCellulase (<i>Trichoderma</i>)	
AZCL-Xylan (Birch or oat)	(refer to Xylazyme AX)	<i>endo</i> -Xylanase
AZCL-Arabinoxylan (wheat)	Xylazyme Xylazyme AX	<i>endo</i> -Xylanase <i>endo</i> -Xylanase
AZCL-Casein	Protazyme AK	<i>endo</i> -Protease
AZCL-Collagen	Protazyme OL	<i>endo</i> -Protease
AZCL-Rhamnogalacturonan	Rhamnozyme	Rhamnogalacturonan-hydrolase and lyase